

Art Unit: 1700

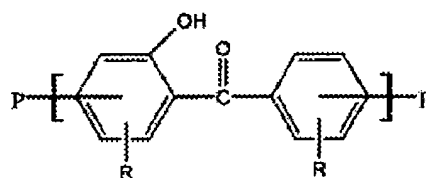
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1. An article comprising a fluorescent dye in a polymeric resin matrix, the polymeric resin matrix comprising at least one polymeric resin, or mixture thereof, selected from the group consisting of:

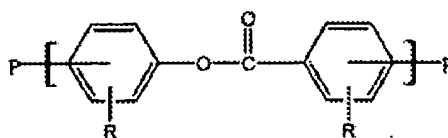
- (i) polymers having a polymeric backbone comprising the following repeating moiety A;



A

wherein R is a non-interfering substituent and P is the remainder of the polymer;
and whereby the polymers are able to absorb ultraviolet light; and

- (ii) having a polymeric backbone comprising the following repeating moiety B:

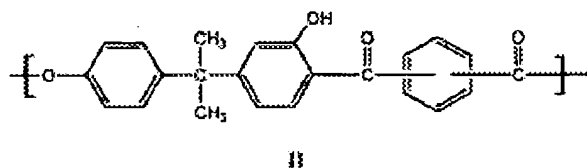
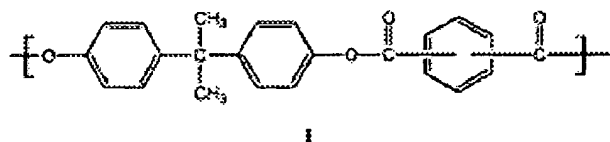


B

where R is a noninterfering substituent and P is the remainder of the polymer; said moiety B being transformable to said moiety A by photo-Fries rearrangement, whereby said polymer comprising moiety B can be transformed to an ultraviolet light absorbing polymer comprising moiety A.

2. The article of claim 1 wherein the polymeric resin comprises a polyarylate.

3. The article of claim 2 wherein the polyarylate comprises one or both of the following repeating structures I and II:



4. The article of claim 1 wherein the polymeric resin comprises a blend of polyarylate and at least one additional polymer.

5. The article of claim 4 wherein said additional polymer is selected from the group consisting of polycarbonate, poly(ethylene terephthalate), poly(cyclohexanedimethanol terephthalate), and poly(cyclohexanedimethanol-co-ethylene terephthalate).

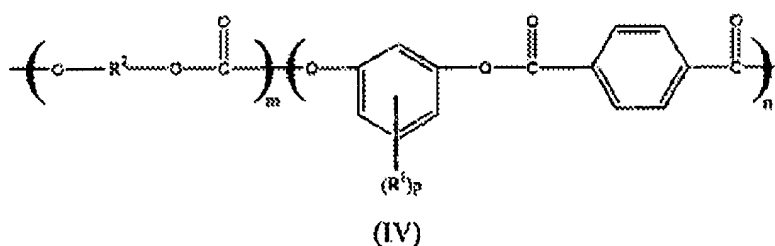
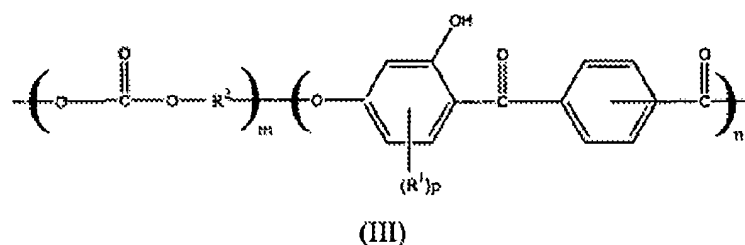
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6. The article of claim 4 wherein the additional polymer comprises poly(ethylene terephthalate).

7. The article of claim 4 wherein said additional polymer comprises polycarbonate.

8. The article of claim 1 wherein said at least one polymer resin comprises a block copolyestercarbonate having arylate blocks and carbonate blocks.

9. The article of claim 8 wherein the block copolyestercarbonate comprises one or both of the following repeating units:



wherein each R^1 is independently H or C_1 - C_{12} alkyl, p is 0-3, each R^2 is independently a divalent organic radical; m is about 2-200; and n is about 30-150.

10. The article of claim 1 in the form of a retroreflective sheeting material.
11. The article of claim 1 wherein the fluorescent dye comprises a dye selected from the group consisting of perylene dyes, perylene ester dyes, perylene imide dyes, thioxanthone dyes, thioindigoid dyes, thioxanthene dyes, benzoxanthene dyes, benzothiazine dyes, naphthalimide dyes, coumarin dyes, and mixtures thereof.
12. The article of claim 11 wherein the fluorescent dye comprises a thioxanthene dye.
13. The article of claim 12 wherein the thioxanthene dye comprises Solvent Yellow 98.
14. The article of claim 11 wherein the fluorescent dye comprises a perylene, perylene imide, or perylene ester dye.
15. The article of claim 14 wherein the fluorescent dye comprises any one or more of Lumogen F Yellow 083, Lumogen F Yellow 240, and Lumogen F Red 300.
16. The article of claim 11 wherein the fluorescent dye comprises a benzoxanthene dye.

17. The article of claim 11 wherein the fluorescent dye comprises a benzothiazine dye.

18. The article of claim 1 wherein said polymeric resin matrix further comprises one or more additives selected from the group consisting of U.V. light absorbing additives and hindered amine light stabilizing additives, said one or more additives being present as an admixture in said polymeric resin matrix.

19. The article of claim 1 further comprising a plurality of retroreflective elements selected from the group consisting of microprismatic cube corners and glass microspheres.

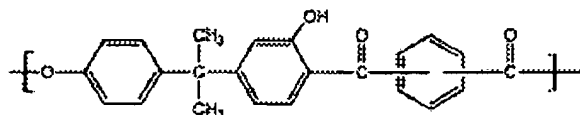
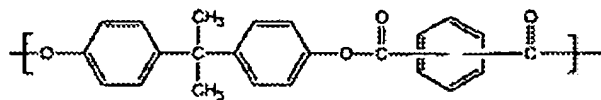
20. The article of claim 19 wherein said retroreflective elements are microprismatic cube corners.

21. (Amended) The article of claim 1 in the form of a fluorescent retroreflective sheeting material comprising:

a fluorescent layer comprising said polymeric matrix comprising a polyarylate and a fluorescent dye admixed therein; and

a plurality of retroreflective elements.

22. The sheeting material of claim 21 wherein the polyarylate comprises one or both of the following repeating units (I) and (II):



23. The sheeting material of claim 21 wherein said polymeric resin comprises a blend of polycarbonate and polyarylate.

24. The sheeting material of claim 21 wherein said polymeric resin comprises a blend of poly(ethylene terephthalate) and polyarylate.

25. The sheeting material of claim 21 wherein the fluorescent dye is selected from the group consisting of perylene dyes, perylene ester dyes, perylene imide dyes, thioxanthone dyes, thioindigoid dyes, thioxanthene dyes, benzoxanthene dyes, benzothiazine dyes, naphthalimide dyes, coumarin dyes, and mixtures thereof.

26. The sheeting material of claim 21 wherein said retroreflective elements are microprismatic cube corners on a surface of said fluorescent layer.

27. The sheeting material of claim 21 further comprising a second layer of a light transmissive polymeric material, with the fluorescent layer being disposed in laminar

configuration over one surface of said second layer and said retroreflective elements being microprismatic cube corners on the opposite surface of said second layer.

28. The sheeting material of claim 21 wherein said retroreflective elements comprise glass microspheres in an enclosed lens configuration.

29. The sheeting material of claim 21 wherein said retroreflective elements comprise glass microspheres in an encapsulated lens configuration.

30. The sheeting material of claim 21 further comprising a capping film or overlamine film disposed in laminar configuration over said fluorescent layer.

31. The article of claim 1 wherein said polymeric resin absorbs substantial amounts of light in a substantial portion of the light spectrum between about 290-410 nm.

32. An article comprising a fluorescent dye in a polymeric resin matrix, the polymeric resin matrix comprising at least one polymer, or a mixture thereof, which either is, or is capable of undergoing rearrangement into, a U.V. light absorbing polymer material.

33. (Amended) The article of claim 32 wherein said at least one polymer is a polyarylate.
